

**Charge for the Director's CD-2/3a Review
of the
MINERvA Project
August 1-3, 2006**

This charge is for the Committee to conduct a Director's CD-2/3a Review of the proposed MINERvA project at Fermilab. The review is to assure that all the requirements have been met for DOE to approve CD-2/3a. Fermilab and MINERvA are planning for limited forward funded procurement in FY2007 so we need to achieve DOE CD-2/3a approval in early 2007.

As part of this assessment the questions listed in Attachment 1 of this charge should be addressed. Additionally the review committee is to review and comment on the Project's response and actions taken on the recommendations from the Director's CD-1 Review of MINERvA on December 13-15, 2005. Constructive comments on presentation content, format, and style are also requested.

Approval of CD-2 by DOE officials is based on a ***Preliminary Design or a Technical Design Report*** for the project, a ***cost and schedule baseline***, and some additional project management documents. The technical part of the review will focus on the technical designs for the Detector. It will answer the questions, ***will these designs meet the technical specifications and are the designs sound. The cost and schedule baselines are based on a detailed WBS – Work Breakdown Structure, WBS Dictionary, BOE – Basis of Estimate documentation, risk and contingency analyses, RLS – Resource Loaded Schedule, and time phased funding and cost profiles. The committee is asked to review each of these items, for quality, completeness, and accuracy.*** The CD-3a approval is sought to allow limited construction comprising specific long lead procurements. Furthermore, the committee is asked to ***review and assess the quality of and comment on the additional formal project management documentation required for CD-2/3a approval.***

Finally, the committee should present findings, comments, and conclusions at a closeout meeting with MINERvA's and Fermilab's management and provide a written report soon after the review.

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Attachment 1

Technical

- Are the technical specifications clearly stated and documented?
- Can the design be built? Does the design meet the technical specifications? Is it a reasonable design?
- Does the baseline design meet the project's objectives (mission need)?

Cost

- Is the Work Breakdown Structure (WBS) appropriate for the project scope?
- Do the cost estimates for each WBS (or cost) element have a sound documented basis and are they reasonable?
- Does an obligation profile exist and is it within the funding guidance profile?

Schedule

- Is the schedule well developed and appropriately structured by specifying relationships, predecessors, successors, critical path, resource loaded, etc?
- Are the durations for the activities and overall schedule reasonable and achievable with the assumed resources?
- Does the schedule contain appropriate levels of milestones, sufficient quantity of milestones for tracking progress and do they appear to be achievable?
- Does the schedule include activities for design reviews, which include assessment of the designs readiness for procuring prototypes, preproduction and production materials?

Management

- Is there an appropriate management organizational structure in place to accomplish the design and construction?
- Is the organization structure well documented, responsibilities defined and appropriate for the scope of work?
- Are there adequate staffing resources available or planned for this effort?
- Is there a funding plan available or proposed to meet the resource requirements to realize the project?
- Has a Risk Plan been developed, risks identified, risks analyzed, risk responses planned/implemented, risk monitoring/control process established and do they seem appropriate?

Procurement

- Have the critical procurements been identified and are they included in the schedule with adequate lead time built in?
- Have critical make vs. buy decisions been evaluated in conjunction with the scope and is that reflected in the baseline cost estimate, schedule and technical risk plan?
- Are the designs final and procurement packages prepared to the degree appropriate to initiate construction as scheduled?